scientific basis of treatment for disorders which are as common as they are obscure.

For a number of years we have possessed definite evidence that the pituitary gland plays a part in the maintenance of sexual life and in the production of the sexual characters of the body. Dr. Blair Bell has carried out a prolonged series of experiments on the pituitary body. His most definite results were obtained by compressing or cutting the stalk of the pituitary gland; in such cases the dogs operated on manifested all those characters which clinicians are familiar with in certain patients. Sexual appetite is lost; the genital glands atrophy; there is an abundant deposit of fat all over the body; the bones become long and slender. He also places on record the notes of a very instructive case—that of a young woman who began to develop certain male characters in face and voice. It was found that her ovaries were of a complex type; in their cortex were true ova, situated in normal follicles; in the centre of the ovaries the tissue assumed a testicular structure, although spermatozoa were not present. It is the examination of such cases which shows how complex are the factors which go to the differentiation of sex. Dr. Blair Bell emphasises the influence of the glandular products on the mental life of the individual. His final conclusion is: *Propter secretiones internas totas mulier est quod est.*

VIGNETTES OF FRIENDS.

Memories. By Edward Clodd. Pp. xi+288. (London: Chapman and Hall, Ltd., 1916.) Price 10*s.* 6*d.* net.

MR. CLODD is well known to readers of NATURE as one who has most successfully introduced the discoveries and generalisations of various departments of science to innumerable readers—old and young. In the course of a long and active life he has made friends with a remarkable number of noteworthy people, being richly endowed with the "genius for friendship." One has only to look through the table of contents of his "Memories" to see how the sympathy of the author reaches out to very diverse types, and there is scarcely a name on the list which does not stand for pre-eminence in literature, art, or science. There are constant references to the pleasant Whitsuntide gatherings under Mr. Clodd's hospitable roof at Aldeburgh, where kindred spirits, but of diverse aptitudes, exchange ideas on all imaginable subjects when eating, smoking, walking, or cruising with their skipper-host in the *Lotus.* To some extent the book is a series of reminiscences of talks on such occasions. The fragment of his own autobiography that Mr. Clodd gives as a sort of preface is interesting reading, and affords a clue to the particular direction of his intellectual activity.

Most of the "Memories" are very short—like lantern-slides thrown on a screen to be rapidly replaced by others. Little is said about Thomas Henry Huxley, but in this case the reader should refer to the author's biography of the biologist. The jottings on Herbert Spencer do not depict the philosopher in a very agreeable light. Concerning Henry Walter Bates we read: "No word of mine can convey the charm infusing the memory of so rare a soul as that which dwelt in Bates. . . . There was a wonderful freshness in all that he said, and a wonderful magnetism in the way he said it." The brief account of Joseph Thomson indicates how much was lost by the early death of a brilliant traveller. The few remarks on Paul B. du Chaillu are of interest, as his early work was erroneously discredited. Andrew Lang has been described as having a "touch of superciliousness in his manner," but Mr. Clodd says "the aloofness was only skin-deep . . . those who came to know him longest learned to appreciate him most. . . . Sometimes he gave offence by the tone of his reviews, the temptation to banter being too great to be resisted. But he bore no malice; and they who submit their wares to the critic must not be too squeamish over the verdict." Samuel Butler "was of the *genus irritabile.* . . . As Chauncey Depew said: 'When once you've stood on your head, the public won't let you stand on your feet.' The truth of this was Butler's irritating experience." The appreciations of Grant Allen, George Meredith, and George Gissing are among the best things in a book replete with shrewd, kindly criticism.

A. C. HADDON.

OUR BOOKSHELF.

Cours d'Hydraulique. By Prof. J. Grialou. Pp. vi+549. (Paris: Gauthier-Villars et Cie, 1916.) Price 20 fr.

THIS volume is designed for the use of advanced students; it embodies the third-year course of lectures delivered by Prof. Grialou at the Lyons Central School. Much of it, naturally, is ground covered by the generality of text-books on the subject, but there are also special sections on particular problems, such as the application of cylindrical co-ordinates to the motion of turbines, the loss of head due to abrupt variation of pipe section, fluid resistance, etc.

Prof. Grialou's treatment is rigorously mathematical, and he explains that he has endeavoured throughout to make constant use of general equations, whether applicable to "perfect" liquids or to liquids characterised by viscosity. He considers that the study of hydraulics has acquired too empirical a character, and that this should be rectified by adhering as closely as possible to theoretical principles.

We certainly agree with him in the desirability of directing the attention of students to the lack of scientific precision in many hydraulic formulæ, but this is in order that too great a degree of accuracy may not be assigned to the numerical results which they give. The conditions attach-

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ing to hydraulic flow in actual practice are such as to render unavoidable a dependence to a greater or less extent on data derived from observation rather than on the predictions which might be based on the behaviour of a perfect liquid.

The book deals with hydrostatics and hydrodynamics as well as with the field of phenomena more strictly known as hydraulics. Wave theory and tidal action are also touched upon. It will thus be seen that the purview of the volume is fairly extensive, with the consequence that the treatment, in parts, is unavoidably sketchy, but, as a whole, it gives a fair presentment of a subject which is beset by many complexities.

One cannot help wondering why such important scientific works in France are published in paper covers, and why it is left to the reader laboriously to cut the pages. B. C.

The Origin of Finger-Printing. By Sir William J. Herschel, Bart. Pp. 41. (London: Oxford University Press, 1916.) Price with paper covers, 1*s*. net.

WHEN Sir Francis Galton issued "Finger-Print Directories" in 1895 he inscribed the volume to Sir William J. Herschel, Bart., in the following words:—"I do myself the pleasure of dedicating this book to you, in recognition of your initiative in employing finger-prints as official signatures, nearly forty years ago, and in grateful remembrance of the invaluable help you freely gave me when I began to study them." And now, in the year 1916, fifty-eight years after he lighted "upon a discovery which promised escape from one great difficulty of administration in India," Sir William Herschel tells the story of how our modern system of identification by means of finger-prints was born in the magistrates' court at Jungipoor, on the upper reaches of the Hooghly. In his dedication to Sir Edward Henry, Commissioner of the Metropolitan Police, Sir William writes as follows:—"I am offering you this old story of the beginnings of finger-printing, by way of expressing my warm and continuous admiration of those masterly developments of its original applications, whereby, first in Bengal and the Transvaal, and then in England, you have fashioned a weapon of penetrating certainty for the sterner needs of justice."

There can be no doubt that England has given the world the most perfect system of identification—identification of an individual by means of his or her finger-prints. The method was initiated by Herschel; it was developed and created into a system by Galton; it has been perfected and applied by Henry. Nor should it be forgotten that it was on the initiative of Mr. Asquith, when Home Secretary in the Liberal Administration of 1892–95, that the method found an early recognition at Scotland Yard. All who are interested in the use and significance of finger-prints will feel grateful to Sir William Herschel for placing on record the first steps of an important development.

LETTERS TO THE EDITOR.

[The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts intended for this or any other part of NATURE. *No notice is taken of anonymous communications.]*

Robert Recorde.

THE reference to the (probably) unique record of a great Welsh man of science in the Notes columns of NATURE (November 2) well illustrates the uncertainty of the data of (even scientific) fame, and the subtle comparison of the latter to the river which submerges merit and floats mediocrity to its destination. It may now be well affirmed that the writer of the Notes paragraph, or the correspondent of the *Western Mail*, or Mr. Arthur Mee in his luminous appreciation in the *Nationalist* of May, 1909, or even the myriad-minded Mr. Lloyd George himself, has done far less than full justice to the achievements of Robert Recorde. Nor has any of them duly underscored the fact that he was a member of our medical profession (M.D. Cantab.), in an age, too, in which the pioneers of the "advancement of science" were mostly disciples of Æsculapius. Accordingly, inquiring readers may well be reminded that Robert Recorde scored a unique series of "firsts" in the very generation in which England tore off the swaddling-clothes of "authority" and stepped boldly forward to grasp the banner of intellectual empire (1510–58), and which exactly preceded that of Francis Bacon, the so-called "Father of Modern Philosophy," of which he knew so much less than little, but regarding the probable value of which he preached with something resembling prophetic inspiration.

Let the reader who would estimate the value of popular reputation now remember that not only was, as we have just been reminded, the great Cambrian man of science the first to "use the sign = to denote equality," and the first who wrote in English on arithmetic and geometry respectively, and to treat the doctrine of "the sphere" in the same language; he was also the discoverer of the method of extracting the square root of multinomial algebraic expressions; his "Whetstone of Witte" was the first English book to use the signs + and −; and he was "the first Briton (in all probability) who adopted the system of Copernicus"—a system which (*horribile dictu*) Francis Bacon remained, in the following generation, permanently unable to comprehend, just as he could neither understand nor accept the *circulation of the blood*, although he had been "puddering in physicke all his life," and his medical adviser was William Harvey himself! His "Urinall of Physicke" survives as one of the valuable rarities of medical literature, and contains many observations which could be utilised to save the latter-day bacteriological pathologist much trouble—and invention! And not only was he a pioneer in mathematics, physics, and medicine, he also was, as we learn from the "Dictionary of National Biography," "deeply skilled in rhetoric, philosophy, polite literature, history, cosmogony, astronomy, astrology, physic, music, mineralogy, and every branch of natural history." No wonder that he found no time to thimblerig for a knighthood (but this was long before the degrading Baboo-Yahoo and Blunderboar-Bulephant creations), or that he died in gaol—not for manslaughter, but for debt.

JOHN KNOTT.

Royal College of Surgeons, Dublin,
November 10.

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